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# (12) United States Patent Kappel et al.

## (54) LOW PROFILE MEDICAL DEVICE AND RELATED METHODS OF USE

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#### (57) ABSTRACT

A medical device including an elongate member having a proximal end, a distal end, and a lumen extending therebetween. The medical device may further include an end-effector disposed at the distal end of the elongate member, the end-effector may include a first arm, the first arm may have a distal end, a proximal end, and an opening configured to receive a needle therein. The medical device may also include a second arm movably connected to the first arm and configured to alternate between a closed position and an open position relative to the first arm, wherein the second arm is movably connected to the first arm at a pivot point disposed at a location closer to the distal end of the second arm than the proximal end of the second arm.

#### 3 Claims, 5 Drawing Sheets

